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ABSTRACT

In addition to determining the value of television viewing as a teaching tool for reading, a study examined the relationship between reading achievement and the amount of time spent watching television. During a 10-week period, 21 fourth grade students of various races and ethnic backgrounds recorded their television viewing schedule. The Step Test reading comprehension and vocabulary scores from the previous year were compared to a second Step Test given at the end of the 10-week period. Results indicated that the gain in reading comprehension achievement approached statistical significance, and that the average number of television viewing hours did not negatively affect achievement in comprehension over the period studied. (Two tables of data presenting the reading comprehension pretest and posttest results are included, and a sample television viewing chart, a chart comparing student pretest and posttest scores, and 21 references are appended.) (MM)

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The Relationship of Television Viewing to Reading Achievement: A Replication

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By

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ABSTRACT

This study involved a class of twenty-one fourth grade children, eleven girls and ten boys. It was hypothesized that there would be a non-significant correlation between reading achievement of children in grade four and the amount of time spent viewing television.

An analysis of the results indicated that the gain in reading comprehension achievement was almost statistically significant. The data also showed that the average number of television viewing hours did not negatively affect achievement in comprehension over a ten week period.

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Today many people especially educators often hear and read about the illiteracy level of the young people. It is interesting to consider what effect television viewing might have on their reading achievement. Carol Paltz's study (1981) indicates negative influences from television on young people can be decreased by informing parents and teachers. On the other hand, positive findings should be used to encourage the use of its educational values.

The effect of television viewing on school progress of children has been a focus of study for many years. Parents and educators have wondered if the hours spent viewing television have affected the educational progress of those children who viewed it. Today children are watching more television. Yet, studies completed to determine the correlation between the number of viewing hours and school achievement still have conflicting results. In a study by Lyle and Hoffman (1971) of first, sixth, and tenth graders, data indicates that television viewing has increased but differences in viewing time is less obvious between socio-economic and ability groups. Students are more critical about what they are watching and are often performing other tasks while viewing programs. Their research also points out that in adolescent years television loses its popularity rating because children develop more social relationships. Children are

watching programs designed for adults or family viewing not those designed especially for them. Cartoons, re-runs, and old movies are the most popular with young children. Parental control of viewing is less for children over six years of age. Joan T. Feely's research (1980) concerning television viewing hours and types of programs viewed by different age groups showed no consistent relationship between reading achievement and television viewing when these factors were compared. John T. Guthrie (1983) researched the same topic and determined that the effect of television viewing on reading achievement was not clearly shown scientifically.

The average television viewing time, according to Lyle and Hoffman (1971),for pre-school children was three hours a day while elementary school children watched four to five hours a day. Schramm (1961) discovered that in earlier years of television viewing, children who watched more than the daily average had lower test scores for academic achievement than the ones who watched less than the daily average in earlier years. Jack Greenstein's study of sixty-seven sixth graders showed that a child who watched television less than 3.9 hours daily had a higher grade point average than those who watched more than the average. B.R. Slater (1965) found that television viewing by her third grade class produced a similar correlation.

LaBlonde (1967) could not determine a clear correlation of the effect of television viewing time and reading achievement. Ridder's study (1961) also discovered no significant correlation of television viewing and grades of students in the first and sixth grades. Susan B. Neuman and Peter Prowda (1982) used data taken from an analysis of reading and television viewing behavior of 7,500 elementary, junior high, and high school students. Their results indicated that reading for enjoyment should be stressed and television viewing should be monitored carefully by parents and teachers. Susan B. Neuman also compiled data which suggested that students who watched a lot of television as well as those who read a small amount of time tended to choose books of inferior quality. In another report examining the relationship between television viewing and reading behavior,Susan B. Neuman (1981) used fourth, fifth, and sixth graders. The reults indicated there was not a relationship between total amount of television viewed with reading achievement and leisure reading habits. However, there was a relationship between adventure shows and reading scores.

Splaine (1978) discovered children who read books which were produced as television programs showed a positive correlation in his visual and verbal literacy study. Perney, Freund, and Barman (1976) examined the effect of television and early school achievement on

kindergarten children and found there was a positive correlation between "The Electric Company" and school achievement. Mark Fetler (1983) analyzed data from a 1979-80 survey of 29,000 nine year olds concerning their attitudes and achievement in reading literature. This data was used to analyze the relationship between reading achievement and television viewing. The results showed a curvilinear relationship between the amount of viewing and achievement. Specifically it showed a mainstreaming effect caused by interaction with social class. Disadvantaged children tended to improve in reading achievement with moderate viewing and decreased less with larger amounts than that of the advantaged students. Results also indicated a lessening of differences in achievement between advantaged students and disadvantaged students with greater amounts of television viewing.

As shown by the above, the subject of reading achievement and its relationship to television viewing has been a controversial issue for many years. As has been shown, some educators believe television viewing accounts for low reading achievement, while others believe it can be beneficial to reading achievement especially since new inventions are available to increase the viewing time. For example, children use video tape recorders and video rental stores which provide more programs for viewing.

Since new inventions are more readily available and television more accessible today than before, a study to determine whether a more significant relationship between the number of hours spent watching television and reading achievement exists is of current interest.

The primary objective of such a study would be to re-examine Carol Paltz's findings (1981) concerning the relationship between reading achievement and the amount of time spent watching television by fourth grade students. Such is the case in this study. A second objective is to determine the value of television viewing as a teaching tool for reading.

Hypothesis

There is a non-significant correlation between reading achievement of children in grade four and the amount of time spent viewing television.

Definitions

Reading Achievement: the scores as recorded from the Step Test.

Television Viewing Schedule: television time and name of program was recorded daily by each pupil.

Assumptions

There are three assumptions. First it is assumed the Step Test is reliable and valid. Second it is assumed the test was given under quality testing conditions. Third it is assumed the children answered

the survey honestly.

Limitations

The population sample was limited to one fourth grade class which could limit the results. The number of hours spent viewing television and the names of programs were determined by the survey. Reading achievement scores were determined soley by the Step Test.

Procedures

Subjects

Twenty-one fourth grade students participated in this study. Eleven girls and ten boys of various races and ethnic backgrounds ranging in age from nine to ten years. They were selected to participate because of the structure of the study being replicated. These students attend school in a middle class school district located in Union County New Jersey. After receiving the permission of the school administrator, a letter was sent to each child's parent requesting permission for the child to participate. Only those children having permission were allowed to participate.

Method

The study began on October 31,1987 with a written participant's survey of preferred activities during free time. It determined TV viewing as the number one preferred activity. An oral survey determined by hand

count the preferred TV programs of the participants. A television viewing schedule was distributed each week to collect data (number of hours of TV viewing in a.m. and p.m.). The children were asked to record daily. The data was transferred to a master schedule. It was collected each week for ten weeks.

The Step Test reading comprehension and vocabulary scores from the district Spring testing of the previous year were recorded to compare the effect of television viewing on reading achievement. The Step Test was given as a post test at the end of ten weeks to determine whether television viewing did effect reading achievement. This test provided norm referenced, criterion referenced items. The vocabulary section contained a list of words which meanings had to be selected for. The comprehension section contained paragraphs which measured literal, inferential, and critical comprehension. The test scores were obtained using raw scores compared to percentile ranks and grade equivalent mid-year grading charts. Assessment was made comparing average weekly hours of television viewing with mean gains made in reading comprehension.

Results

The data collected (see Appendix A) on television viewing showed children watched television a total of 2,191.5 hours in ten weeks. The average viewing time was 219 hours and 9 minutes.

The data collected also indicated students preferred situation comedies and cartoons over other programs. Adventure programs were watched by some of the students. The top five situation comedy shows preferred were:

1. Alf
2. The Cosby Show
3. Who's the Boss?
4. Family Ties
5. Growing Pains

The top five cartoons preferred were:

1. Alf
2. Jetsons
3. Muppets
4. Teen Wolf
5. Real Ghostbusters

The total reading comprehension grade equivalent scores for the Step Tests, pre and post, were determined after ten weeks. The mean, standard deviation, and Pearson Product moment r were

calculated.

The Pearson Product moment formula was applied to determine the correlation between reading comprehension scores and the average number of television viewing hours. As can be seen in Table one, the sample made a mean gain in comprehension of 7 months. They appear to be progressing at the expected rate, that is, 7 months gain in seven months of school.

Table I

Mean, Standard Deviation, and r of the pre and post test results of the sample on reading comprehension

	Mean	SD	r
Pretest	4.62	0.79	0.96
Posttest	5.22	0.77	

A correlation co-efficient of .96 between the pre and post test results was obtained.

Table II

Mean, Standard Deviation, and T of the pre and post test results of the sample on reading comprehension

	Mean	SD	T
Pretest	4.62	0.79	1.89
Post test	5.22	0.77	

approaching significance.

Analysis of the test results shows that the gain in reading comprehension achievement in the 7 month period was almost statistically significant as .05 but needing a gain of .07 to be significant. These data confirm that the average number of television viewing hours (219 hours and 9 minutes) did not negatively affect achievement in comprehension.

Conclusions

A comparison of the data collected with the hypothesis shows that there is a correlatiion approaching significance between reading achievement of children in grade four and the amount of time spent viewing television. This study determined a level of .05. A level of .07 is needed to be significant. Carol Paltz's study (1981) did not determine television viewing to have a negative effect on the reading achievement of children this age as is the case with this study which replicated her work.

Although this study did not show television viewing to have a negative effect on reading achievement, further research would provide data needed to determine the effect on more children before determining the negative or positive effect of television viewing on reading achievement. Research indicates parents should be aware of the conflicting evidence. Research also indicates parents can help develop good viewing habits by guiding program selection, encouraging leisure reading, and structuring schedules to balance leisure activities. Teachers could use television viewing as a learning device by preparing activities which guide students in using different reading skills.

Television Viewing and Reading Achievement

Related Literature

A review of related literature shows more conflicting evidence regarding the negative or positive influence of television viewing on reading achievement. Fran Lehr's research (1981) of a Canadian study [Williams, ED 172293] showed "Notel" a community in Canada which never had television was affected negatively by its arrival in their community. The study she reviewed used pupils in grades 2, 3, and 8. Their reading skills had been measured before the arrival of television and compared to two other communities which had television. After viewing television for two years the same pupils were retested along with those now in fourth and fifth grade. Their results showed that male second grade students had been better readers before viewing television. Third graders (boys and girls) showed a decrease in reading skills after viewing television. Eighth grade pupils showed no differences in reading skills. This research indicates that television viewing effected those who were acquiring reading skills. Her research also showed that those children became more verbal and physically aggressive, decreased participation in their community activities, and formed more traditional sex role attitudes after two years of television viewing.

Susan B. Neuman and Peter Prowda's research (1982) focused on television viewing and young people's

interest and achievement in reading. They analyzed reading patterns and television viewing behavior of 7,500 students from grades 4, 8, and 11. Data collected showed over half (53%) of the fourth graders who participated watched more than four hours of television a day compared to eighth graders (40%) and eleventh graders (18%). Percentages of students watching less than one hour were fourth grade (7%), eighth grade (7%), and eleventh grade (24%). Their findings indicate that television viewing decreased with age. Their research revealed that most of the pupils read a minimum of five hours a week or less for enjoyment. Children reading less than an hour per week were 24% to 34% with older children spending the least amount of time reading for fun. This data indicates that reading for fun decreases as children grow older. Neuman and Prowda also point out that preferences for media patterns change as age increases. Negative relationships between reading achievement and viewing television were seen on all grade levels. They attributed low scores on achievement tests to more than four hours of television per day. Neuman and Prowda concluded that reading for pleasure should be stressed in the school curriculum and at home. They suggest that television viewing be monitored to avoid over use.

Susan B. Neuman researched (1981) the effect of

viewing television on reading patterns. She determined that the relationship between the two media (television and reading) could be shown by the Displacement effect theory and the Content effect theory.

Displacement effect theory refers to making a choice between alternatives which will satisfy a specific need. She cites Hammelweit et. al. (1958) and Schramm et. al. (1961). Both found that the reading of comic books deminished significantly when cartoons appeared on television.

Content effect theory refers to the specific nature and quality of programs shown on television. Certain shows may motivate new interests or activities in subject areas. Neuman cites Solomon's (1976) research in which students watched television programs while reading along with a script. Research showed this technique to be effective with less able readers.

Neuman's study consisted of 198 pupils in grades 4-6 from middle class families. She obtained permission of the parents to review each participant's file. Each family was requested to complete two logs daily for four weeks. Television logs were used to record regular television programs and educational programs. Reading logs were used to record the number of books, newspapers, magazines, and comic books read. The logs were returned and the information charted to determine

what was viewed and its relationship to reading achievement and leisure reading habits.

The results were compared with data collected before the study on the same topics. Her findings showed the children viewed television 14.3 hours a week. This was below the national average of 27 hours. The specific programs were analyzed by genre and the data showed comedies were viewed more than any other type of show.

Content effects of television with reading behavior showed correlations between subcatagories of viewing and reading material to be positive. Adventure shows, movies, and sports showed a negative correlation to magazine reading. Newspapers showed a positive relationship to television news. The results showed insignificant relationships between television and fun reading.

Displacement effects (hours viewed) showed correlations between television viewing, achievement scores, and fun reading (magazines, newspapers, etc.) to be slightly negative though insignificant. A small positive correlation was reported between comic books and television viewing.Television content viewing and reading achievement showed negative correlations. Her conclusions do not support the belief that hours of television viewing effect reading achievement

significantly. Neuman does see a need for further research concerning television viewing and its effect on reading behavior.

Richard J. Telfer and Robert S. Kahn (1984) based their research on that of Susan B. Neuman and Peter Prowda (1982). Their findings support Neuman and Prowda's data on age related differences in TV viewing and reading habits. Fourth graders spend more time watching television and more time reading for enjoyment. Telfer and Kahn studied media (radio, television, music) and reading to determine if other types of reading (homework) decreased with age as well. They analyzed the habits of 234 pupils in grades 4, 8, and 11. Their findings showed fourth graders tended to combine reading with television. Fourth graders also had lower reading scores if they watched a lot of television. An age relationship between television viewing and time spent reading homework was not observed. Therefore their suggestion that other types of reading took the place of reading for fun was not supported.

Joan T. Feely's findings (1980) indicate television viewing hours are increasing for the population in general. Research shows preschoolers view television between 23 to 54 hours per week. a study of middle graders from a suburban area in New York shows

they watch 20 hours of TV a week. Students of the same age in North Carolina watch 5 hours a day and up to 9 hours a day on weekends. Studies have shown that children have watched TV 4,000 to 5,000 hours before first grade. 15,000 hours of TV have been watched before graduation from high school by many students. Preschoolers listed over 80 programs that they view. Primary pupils watch cartoons, situation comedies, and action-adventure shows. Middle grade pupils watch crime, game, variety, sports, news, and public affairs programs. Junior high students continue this pattern but include situation comedies. She found that most programs watched by children are adult programs. She also found that parental control over what was viewed lessened after the age of six years.

Feely's study consisted of middle grade pupils in Hackensack and Randolph Township. An informational cluster survey was distributed to the participants. The children were asked about their interest in the title and given a short description of content, and then asked if they preferred to read or to watch it. The data collected indicated that boys as well as girls disliked watching science shows. Boys watched sports, historical-adventure, and fun-fantasy. Girls watched shows about animals, fun-fantasy, and social empathy. The results were compared to a previous one (1971).

Data showed the middle graders would rather watch the content described than read it. Results from 1971 of mean read preferences ran 17.20 to 21.96 out of a possible 50 while the current study's results ran 13.00 to 19.78. Interest in viewing showed little change. 1971 the mean preference score range was 30.57 to 32.91 out of a possible 50 while the current study range was 30.05 to 32.87.

Some exceptions were noted. Suburban girls gave the animal cluster almost the same preference scores and it ranked higher on their read and watch list. Boys and girls ranked science titles low on their viewing list. Boys preferred to read this title. She pointed out that other researchers saw no conflict between reading and viewing because book sales were up in stores and book circulation from libraries remained up as well even though TV viewing hours were high. Feely concluded there was little evidence to support the belief that reading achievement decreased because of television viewing.

patricia A. Williams, Edward H. Hartel, Geneva D. Hartel, and Herbert J. Walberg combined data about the effect of leisure time television viewing on school achievement in grades K-12. They studied 23 educational and psychological review articles, doctoral dissertations, statewide assessments, national

surveys, articles from journals, technical books, and unpublished papers to form 274 correlations. Their research revealed that early methods of collecting data and project designs produced conflicting evidence concerning the effect television viewing had on children's school achievement.

Early research designs compared students with television in the home to those without television in their homes. Later studies compared the amount of leisure time spent viewing television with school achievement. Methods of data collection ranged from a single question (How many hours do you watch television?) to logs recording all of a child's daily activity after school up to bedtime. Some methods required students to keep track while other methods required parents to keep track. Students' estimates were sometimes obtained by personal interview. Williams, Hartel, Hartel, and Walberg (1982) discovered that this method was not used often. They determined that different methods of data collection relating television viewing and school achievement accounted for several unanswered questions. For example: How much does television viewing effect school achievement and in what way? Which are affected more girls or boys? Is there a different effect on high and low IQs?

Williams, et al applied the skills of research

synthesis to answer those questions. Techniques developed by [Glass (1978); Gage (1978); Jones and Fiske (1953); Light and Smith (1971); and Rosenthal (1976)] were used to synthesize the data relating leisure time television viewing to school achievement. No new information was collected in this process. They listed characteristics of the sample, type of outcome, quality of the study, method of collecting viewing data mean hours of viewing, and strength and direction of observed relationships to code each study. Their findings showed a small negative (-.05) correlation of hours of television viewing with school achievement. The size of the sample was not important nor was the year and location of the research. The effect was constant across the range of viewing hours. The data indicated that up to 10 hours of viewing time produced a positive effect. However, beyond 10 hours the effect was negative and more harmful until viewing time reached 35-40 hours which showed little effect at that point. Females and those children with high IQ scores were more adversely affected than other groups. The reasons for this negative relationship may be caused by differences in the activities which replace television viewing or the types of programs watched. This research also indicates the influence of television on school achievement is dependent on the hours of viewing time.

The researchers felt it could be assumed that those children viewing less than ten hours of television per week were in homes where parents exercised more control over viewing time as well as program selection. They also believe that further research is necessary to determine television viewing's effect on school achievement.

Jack Greenstein's study (1954) of mixed ethenic groups of 67 sixth graders from low middle income families required a confidential questionaire concerning favorite radio and television programs and their school records. The school records (for subject grades) were useful only after equivalent numerical values were substituted for letter grades for statistical calculation. All participants had their grades combined to produce one mean grade per semester.

The data pertains to pupils in third, fourth, and fifth years of school. The results indicate that grades are not negatively affected by television viewing. This data showed that those watching television had consistently higher grades than those who didn't watch television. Yet, he believed more research was needed before linking television viewing and school achievement positively.

Sharon Gadberry's cross-sectional longitudinal study (1977) compared three Canadian towns pseudonymed

"Notel", "Multitel", and "Unitel". Notel was about to receive television. The other two had television reception already. This study was done to determine whether watching television had an effect on school creative achievement. There were 43 male and 47 female middle class pupils in the sample. They were placed in three groups by age (6-7, 8-9, and 10-11). The participants were tested twice 18 months apart. Cross lagged panels were tested using correlations between viewing amount, school grades, and effort grades.

Viewing habits of Unitel and Multitel showed a median of 21 and 23 hours of viewing per week. Notel residents purchased television sets before reception began. Two years later 90% of the homes had television sets and Notel had a median of 25 viewing hours per week like the other two towns. Aggressive behavior, reading skills, associative fluency (creativity), block design, and vocabulary scores; sex role perceptions and attitudes as well as participation in community activities were measured to determine if television viewing had an effect on them.

Children's aggressive behavior was tested by two trained observers using a checklist of physical and verbal behaviors. The chilldren were observed during free play on the playground for no more than one minute, 21 times over a period of 7-10 days. Five male

and five female children in each of the three towns were observed in grades 1,2,3,4, and 5. Two years later the same children were observed if possible using the checklist for verbal and physical behaviors. Forty-four of the sixty third and fourth graders in the second phase had been observed in the first phase. Sixteen were observed for the first time in the second phase.

A repeated analysis of variance (three towns, two sexes, two phases) based on a longitudinal study of the 44 children observed before Notel received television showed increased verbal and physical behavior for Notel but not for the other two towns.

A cross-sectional study was done to determine if developmental trends caused the increases in aggressive behavior. It was concluded that different methods of instruction and subtle differing personality traits were not the cause for the increase.

Gadberry's research also revealed new evidence on an earlier study conducted by Linda Harrison and Tannis MacBeth Williams on the relationship of television viewing and cognitive development. Gadberry's research tested the impact of watching television on three primary abilities verbal skill, spatial skill, and ideational fluency. She hypothesized that watching television would have a negative effect on ideational fluency and a positive effect on verbal skill

development.

Verbal skill development was tested using the Wechsler Intelligence Scale for children (WISC) and spatial skill was tested using the WISC block design subtest. Scaled scores were used in the study to permit adjustment for differences in age. Ideational fluency was measured using Wallach and Kogan's (1965) work on creativity. A verbal test was given which assessed creativity. The object was named and the child was asked to name as many uses as possible for the object. Figural ideational fluency was tested using a line drawing. The child was asked to name all the things it could possibly be.

This part of the study was given to all participants in both sections of the study in grades 4 and 7 in all three towns, 160 children in the first part and 146 in the second part. Children in grades 6 and 9 were given these tests because they were tested two years earlier (grades 4 and 7). There were 137 participants still available (86%) from the longitudinal comparison.

The data showed no town differences in either part of the study for the cross-sectional or longitudinal samples. The cross-sectional sample revealed boys scores were higher than those of the girls in all three towns in both parts of the study. The longitudinal

study indicated that in the second part boys scores were higher in grade 6 but by grade 9 this was no longer true. The data supported earlier findings concerning block design tasks. Boys scores were higher than girls.

Research on verbal skill scores for the first part proved positive for the effect of television viewing on verbal skill development. At that time Notel was without television. Multitel children had significantly higher scaled vocabulary scores than Notel children. Unitel vocabulary scores fell between the other two towns. In the second part of the study the data showed no differences in town vocabulary skill development. The mean score for Notel increased but Multitel's mean score decreased. Multitel's scores were the only ones to change from the first part to the second part. This data indicates television viewing has no effect on performance task using the WISC vocabulary and block design subtests on children in grades 4 and 7. Verbal fluency for Notel children decreased significantly as had been hypothesized. Figural fluency scores showed no differences in either part of the cross-sectional study but Unitel increased from the first part to the second part significantly. The findings do not support the idea that television viewing has a negative effect on creative skill development. It does point out a

negative relationship between television viewing and verbal skill development.

Robert C. Hornik (1969-1973) researched the effects of home television viewing on reading skill development and general school achievement of El Salvadoran children in grades 7-9 over a two year period. These students were placed in three groups to be studied. Cohort A (902 7th graders in 1969) Cohort B (707 7th graders in 1970) Cohort C (600 7th graders in 1971) were studied until the end of 8th grade. Academic tests were given at the end of each school year to determine progress in mathematics, science, and social studies. The Educational Testing Service prepared the tests until 1972. Then the tests were prepared locally. The results provided information concerning short term school achievement and long term cognitive skill development. The evidence on short term school achievement did not support the idea that television viewing had an effect on school achievement. However, watching television seemed to have a negative effect on long term development of reading skills for all three cohorts of El Salvadoran junior high school students.

Paul Witty studied the effect of television viewing on children in the Chicago area (1949-1965). His research was conducted annually. The methods of collecting data included surveys (pupils, parents, and

teachers), questionaires, interviews, and logs kept by pupils and parents. The logs kept provided data about hours of television viewing, radio listening, movie attendance, favorite shows, and feelings about the mass media. Earlier studies provided data about leisure time reading, intelligence, educational progress, and personality adjustment. All data was summarized according to method and extent of mass media participation and its relationship to behavior (attitudes) believed to be affected by mass media.

Witty's research discovered that in 1949-1950 43% of the pupils had television sets in their homes. By 1959 99% had televisions in their homes. Almost all pupils had access to televisions in their homes in 1965. Over one third had two televisions and many reported having color television sets.

Elementary pupils averaged 21 viewing hours per week in 1949-1950. The average dropped to 19 per week in 1951 then increased with the installation of the coaxial cable. Then a weekly average of 20-21 hours was reported annually by elementary students. The weekly average for viewing in 1965 was 20 hours. First graders had a weekly average of 15 hours. Fifth graders had a maximum of 25 hours averaged. A drop of three hours was reported during the summer.

The programs preferred by elementary students were

variety shows, cartoons, comedies, adventure, mystery, western, and science fiction. Radio programs remained popular although television had more appeal. Second graders (1965) listened to radio shows three hours per week while fifth and sixth graders averaged eight hours weekly. Programs playing music were in first place for preference, baseball was second for boys. Girls preferred news.

Pupils attended movies outside their homes weekly or bi-weekly. Before televion they attended the movies weekly.

Parental control over program selection generally was not enforced. Although there was concern over the amount of violence displayed in programs as well as complaints about the inferior quality of programs on television.

Witty's data also showed pupils as well as teachers recognized the value of quality programs to enhance learning. In 1965 about 50% of the pupils stated television viewing was helpful in motivating them to learn. About 25% of elementary pupils stated television programs encouraged them to read specific books.

Further investigation by Witty indicated a relationship of hours of television viewing to reading achievement at the extreme. Fifth graders in the upper

quarter of their class on achievement tests averaged 19-20 hours per week while pupils in the lower quarter averaged 27 hours. The entire group averaged 21 hours. He concluded that these differences occurred because the lower quarter was more limited with opportunities than the upper quarter.

His study also provided no data to support the idea that children read less as a result of watching television. In fact, his findings indicated children read slightly more as a result of watching television. Few pupils believed television caused them to read less. Many children believed it was why they read more. Previous research by Arnold L. Lazarus was supported by his research. Although Lazarus pointed out more time was given to viewing television than to reading. Witty revealed no clear data concerning the harmful effect of television viewing on school achievement. However, this data was also supported by the research of Donald G. Tarbet. Tarbet studied 1,500 sixth graders and determined that up to 20 hours of viewing per week would not be harmful to leisure reading or academic progress. Witty cited Wilbur Schramm to support his data also. Schramm could not determine whether large amounts of television viewing in any elementary grade would be harmful to school progress. Joyce Marion Ridder was cited. She studied the grades in English,

social studies, and mathematics for 2,428 seventh and eigth graders. Ridder concluded after comparison with total viewing hours of television that no significant relationship could be found.

Witty's findings indicate that television may be a source of stimulus. Parents and teachers can encourage positive use by setting a good model in their own behavior and attitudes. If parents use books often to find information, perhaps children will also. If parents plan schedules which provide time for reading, television viewing, and other activities, then children will blend television viewing into a well balanced pattern of leisure activity.

Paul Witty also reviewed studies of mass media and their effect on children's daily lives (1949-1965). Cunningham and Walsh (1948-1950) surveyed to determine who watched more television. Their findings showed that more people between the ages of 5 and 6 watched television. They averaged four hours a day. After the age of seven the hours of television viewing decreased. Gertrude Young's data indicated a range of one and one-half hours to five and one-half hours of daily viewing at the junior high school level. Jack Gould's study of Burdick Junior High School in Stamford, Connecticut showed 50% of the students had television sets. Yet, 79% watched programs regularly. Those with

television sets averaged 3.86 hours a day of viewing while those without a TV averaged 2.64 hours per day.

As a result of these early studies many educators and parents expressed concern over the effect television viewing might have on cognitive development. There was concern that children might become physically aggressive and short tempered after watching television.

Still other parents and educators believed television provided opportunities to form closer family units or establish a family unit. Teachers also felt television was a source of motivation for school achievement.

Witty's research pointed out that fewer complaints about decreased reading were recorded. He found evidence which showed positive use of television as an instructional tool. A Brooklyn school instructed pupils on how to select television programs. The students discussed and completed activities related to TV which helped them develop skills and interests in other areas. As a result less time was spent watching television. Charles G. Spiegler experimented using books which appealed to boys based on their reactions to certain television programs.

Witty concluded that increased guidance was necessary for children viewing television. He pointed

out that there are positive aspects to television viewing and constructive guidance in program selection at home and in school is necessary.

Lloyd F. Scott conducted a study to determine whether any relationships existed between either the total viewing hours of television or the hours spent viewing educational programs using the following characteristics:

1. intelligence quotient
2. achievement in reading, arithmetic, language, and spelling
3. occupational rating of parent
4. personal and social adjustment
5. educational and leisure time interests

Scott investigated four randomly selected schools in San Leandro, California. The participants were (456) sixth and seventh graders from a range of socio-economic positions. Checklists and questionaires were administered to determine which students had television sets and which programs were actually being watched. Participants who didn't have television sets were not included in data analysis. Parent surveys to determine when televisions were purchased were conducted. Interest surveys (Jersild and Tash Springfield Interest Finder) were also conducted to determine preferences. The items were rated using numbers 1-3, one being dislike, two being indifference,

and three being like. These surveys were given twice, once in reverse order to determine reliability. A coefficient of .88 was found.

Validation questions (completion type) were administered concerning each program to determine if programs were actually viewed. California Tests of Personality (1953) were also given. Data on school achievement was collected from personal files. If files were incomplete or test information was older than one year these children were not included in the study.

Groups were formed for comparison using the following criteria: total viewing time, educational viewing time, and proportion of educational viewing time to total viewing time. The groups contained the upper and lower 27% of the groups according to distribution of viewing times. Comparisons of the means of the group pointed out the relationships sought. Four hundred seven children were used in the comparison. Some were absent too frequently or had moved.

Intelligence quotient scores and educational quotient scores were used to compare mental ability and school progress. This procedure permitted better control of the age factor since previous research suggested television viewing could vary in the age ranges of this study. It was also suggested that variation could be caused by mental maturity.

The California Test of Mental Maturity, long form, and California Achievement Tests complete battery were given to test intelligence and school progress. A pamphlet published by the Educational Television Research Association (March 1954) was used to determine if a program was educational or informational. Warner's Index of Status Characteristics was used to rate occupations.

Previous research indicated that sex, age, and period of television ownership were factors which affected the amount of television viewing. Therefore, Scott felt it necessary to analyze data in these areas for comparison. Significant differences were noticed in several areas. Children who watched a lot of television were affected more adversely than those who watched less television in arithmetic (1%). Those who watched more TV were significantly weaker in reading achievement than those who viewed less (5%). There was a significant difference between upper and lower groups in total achievement (5%).

Significant differences were found in the area of intelligence quotients. Children who watched television more had significantly lower intelligence than those who watched less. This was most noticeable in verbal intelligence measured by the California Test of Mental Maturity.

Occupational rating indicated a significant difference favoring children who watched less TV. Those who watched more TV seemed to come from families whose occupations were less preferred.

The data showed no relationships for personality, educational, or leisure time interests. Comparisons between groups from upper and lower ranges of distribution of educational viewing time and proportion of time spent viewing educational programs showed no significant differences because data was positively distorted. Children did not watch educational shows.

Scott's research indicated the necessity for more investigation. He revealed relationships between television viewing hours, educational achievement, intelligence, and occupational areas. Data showed inter-relationships between the characteristics of children viewing TV and factors contributing to the relationships.

Another experiment was conducted to teach personal responsibility for determining appropriate programs to watch by Fern Loebel and Joan Melvin (1987). Seventy-five gifted and talented students in Cranford, New Jersey surveyed the students in the five schools of their district. They collected data based on prepared questionaires concerning television viewing's effect on their lives. Boys outnumbered the responses of girls

slightly out of a total of 699. The data was tabulated using computer software called "Survey Taker".

The results indicated more than 75% of those surveyed stated they watched television every day (77%). Forty-one per cent watched TV two to three hours every day. Almost twenty-five per cent watched TV four to five hours daily. Only 18% said they watched TV one hour or less daily.

Analysis of the data showed most viewing occurred on weekends and in the evenings. Students played with friends or completed assignments after school. Forty-five per cent of the students indicated other interests over watching TV. Thirty-five per cent would not want to be without TV. Fifty-nine per cent said they watched TV when they were bored. Most watched TV while eating (53%). Comedy programs ranked highest (35%) on preference lists. Adventure and horror shows ranked second (23%).

Most children (38%) said parents did not restrict what they watched. Thirty-five per cent said parents restricted some viewing. Most of the children surveyed (53%) said they decided what they watched at home. Forty-one per cent said they sometimes watched R-rated movies on TV. Thirty-one per cent could not decide if there was too much violence on TV. Thirty-eight per cent said they watched cartoons with violence.

The children's research indicated that if given a choice soap operas (39%) and talk shows ((32%) would be removed from TV schedules. Some children (39%) would like to be TV characters, even more (63%) would like to be in a TV show.

The results of this experiment produced the desired outcome. The children developed awareness about the effect television had on their lives as well as the lives of their relatives, and they became more selective about what they viewed.

All of the research reviewed shows conflicting data concerning the effect of television viewing on school achievement. It also shows relationships concerning cognitive development and children's behavior. Although more evidence supports a positive effect, it is important for parents and educators to be aware of the negative findings. The data reviewed does not merely point out the problems. Many suggestions are given on how to use this research to improve school achievement in the classroom and in the home. Teachers can help students by preparing activities which will encourage the use of television as a learning device. Parents can structure family activities so a balance between television viewing and other activities will result in promoting good viewing habits.

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Appendices

APPENDIX A

TELEVISION VIEWING CHART

NAME: WEEK OF:

	HOURS VIEWED		
	A.M.	P.M.	DAILY TOTAL
SATURDAY			
SUNDAY			
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
		WEEKLY TOTAL:	

APPENDIX B

Reading Comprehension

student number	pretest (C)	posttest (D)	C-M	D-M
1	5.10	5.30	.48	.08
2	5.10	5.30	.48	.08
3	5.10	6.00	.48	.78
4	2.90	4.20	-1.72	-1.02
5	2.90	3.90	-1.72	-1.32
6	5.10	6.10	.48	.88
7	4.50	4.10	- .12	-1.12
8	5.10	5.30	.48	.08
9	5.10	6.10	.48	.88
10	5.10	6.10	.48	.88
11	5.10	5.30	.48	.08
12	5.10	6.10	.48	.88
13	5.10	6.10	.48	.88
14	5.10	6.10	.48	.88
15	4.50	4.20	- .12	-1.02
16	5.10	4.20	.48	-1.02
17	3.10	5.30	-1.52	.08
18	4.40	5.30	- .22	.08
19	5.10	4.20	.48	-1.02
20	3.40	5.30	-1.22	.08
21	5.10	5.20	.48	- .02
Total 21	97.10	109.70	.00	.00
Mean (M)	4.6238	5.2238		
Std Dev	.7873	.7702		
Var	.6199	.5932		
Cor	.9870			